CLAIMS

1. A water absorbent resin composition, comprising a particulate water absorbent resin (A) having a cross-linking structure obtained by polymerizing an unsaturated monomer containing an acid group, said particulate water absorbent resin (A) being cross-linked in a vicinity of a surface of the water absorbent resin (A), wherein:

the water absorbent resin composition contains 95 wt % or more of particles whose particle diameter is less than 850 μm and not less than 106 μm, and a weight average particle diameter of the particles is less than 500 μm and not less than 300 μm, and a logarithmic standard deviation (σζ) of a particle size distribution of the water absorbent resin composition is 0.45 or less, and a water-soluble component of the water absorbent composition is 35 wt % or less, and

the water absorbent resin composition includes a multivalent metal component, and an extraction rate of the multivalent metal component is 5.0 wt % or more and less than 100 wt %.

2. The water absorbent resin composition as set forth in claim 1, wherein the particulate water absorbent resin (A) is a particulate water absorbent resin in which the vicinity of the surface is further cross-linked by a surface cross-linking agent containing a polyol.

3. The water absorbent resin composition as set forth in claim 1 or 2, wherein a moisture absorption blocking ratio a is 30 % or less when the water absorbent resin composition is left at 25°C in a relative humidity of 90 % for an hour.

4. The water absorbent resin composition as set forth in any one of claims 1 to 3, wherein a centrifuge retention capacity (CRC) at which the water absorbent resin composition absorbs 0.90 wt % of a physiological saline without load for 30 minutes is 25 g/g or more, and a diffusion absorbency (DAP) at which the water absorbent resin composition absorbs 0.90 wt % of a physiological saline at 1.9 kPa for 60 minutes is 20 g/g or more.

5. An absorber, comprising the water absorbent resin composition as set forth in any one of claims 1 to 4 and a hydrophilic fiber so that an amount of the water absorbent resin composition (core concentration) is 20 wt % or more with respect to a total amount of the water absorbent resin composition and the hydrophilic fiber.

6. An absorbent article, comprising: the absorber as set forth in claim 5; a liquid-permeable surface sheet; and a liquid-impermeable back sheet.

7. A method for producing a water absorbent resin composition, comprising the steps of: adding a solution of an aqueous multivalent metal compound (B) to a particulate water absorbent resin (A), having a cross-linking structure obtained by polymerizing an unsaturated monomer containing an acid group, which is cross-linked in a vicinity of a surface of the particulate water absorbent resin (A); and mixing the solution of the aqueous multivalent metal compound (B) with the particulate water absorbent resin (A), wherein:

the particulate water absorbent resin (A) contains 95 wt % or more of the particles whose particle diameter is less than 850 μm and not less than 106 μm, and a weight average particle diameter of the particles is less than 500 μm and not less than 300 μm, and a logarithmic standard deviation (σζ) of a particle size distribution of the particulate water absorbent resin (A) is 0.45 or less, and a water-soluble component of the particulate water absorbent resin (A) is 35 wt % or less, and

an amount of a multivalent metal component contained in the solution of the aqueous multivalent metal compound (B) is 0.001 to 10 wt % with respect to the particulate water absorbent resin (A), and

a concentration of the aqueous multivalent metal compound (B) in the solution is 0.40 or more with respect to a saturated concentration of the aqueous multivalent metal

compound (B) in the solution, and

temperature of the particulate water absorbent resin (A) is 50°C or higher and lower than 100°C, and/or temperature of the solution of the aqueous multivalent metal compound (B) is 30°C or higher and lower than 100°C.

8. A method for producing a water absorbent resin composition, comprising the steps of: mixing a particulate water absorbent resin (A) having a cross-linking structure obtained by polymerizing an unsaturated monomer containing an acid group, a solution of an aqueous multivalent metal compound (B), and an organic surface cross-linking agent (C); and heating a mixture that has been obtained in the mixing step at 150 to 300°C so as to cross-link a vicinity of a surface of the particulate water absorbent resin (A), wherein:

the particulate water absorbent resin (A) contains 95 wt % or more of the particles whose particle diameter is less than 850 μm and not less than 106 μm, and a logarithmic standard deviation ($\sigma\zeta$) of a particle size distribution of the particulate water absorbent resin (A) is 0.45 or less, and

an amount of a multivalent metal component contained in the solution of the aqueous multivalent metal compound (B) is 0.001 to 10 wt % with respect to the particulate water absorbent resin (A), and

a concentration of the multivalent metal component

contained in the solution of the aqueous multivalent metal compound (B) is at least 1.80 wt %.

9. A method for producing a water absorbent resin composition, comprising the step of heating a precursor (D) obtained by mixing a particulate water absorbent resin (A) having a cross-linking structure obtained by polymerizing an unsaturated monomer containing an acid group, a solution of a multivalent metal compound (B), and an organic surface cross-linking agent at 150 to 300°C so as to cross-link a vicinity of a surface of the particulate water absorbent resin (A), wherein:

the particulate water absorbent resin (A) contains 95 wt % or more of the particles whose particle diameter is less than 850 μm and not less than 106 μm, and a logarithmic standard deviation (σζ) of a particle size distribution of the particulate water absorbent resin (A) is 0.45 or less, and

an amount of a multivalent metal component contained in the solution of the multivalent metal compound (B) is 0.001 to 10 wt % with respect to the particulate water absorbent resin (A), and

a humidification blocking ratio (wt %) of the precursor (D) is 80 wt % or less.

10. The method as set forth in any one of claims 7 to 9,

wherein the water absorbent resin composition includes a polymer having a cross-linking structure obtained by polymerizing acrylic acid and/or salt thereof.

11. The method as set forth in claim 9 or 10, wherein a concentration of the multivalent metal component contained in the solution of the multivalent metal compound (B) is at least 1.80 wt %.

12. The method as set forth in any one of claims 8 to 11, wherein the solution of the multivalent metal compound (B) and/or the organic surface cross-linking agent is heated at 30°C or higher.

13. The method as set forth in any one of claims 8 to 12, wherein the organic surface cross-linking agent includes a multivalent alcohol.

14. The method as set forth in any one of claims 8 to 13, wherein the multivalent metal component of the multivalent metal compound (B) includes one or more metals selected from bivalent or further multivalent typical metals and transition metals whose group numbers are 4 to 12.

15. The method as set forth in any one of claims 8 to 14,

wherein the multivalent metal component of the multivalent metal compound (B) is aluminum.